ABSTRACT

A system for adjusting a height of a first road vehicle with respect to the ground prior to impacting a second road vehicle is disclosed. The system includes a predictive crash sensor mounted to the first vehicle for sensing the second road vehicle, a control unit, and a height adjustment apparatus. The control unit is in communication with the predicative crash sensor for receiving a predictive crash signal and determining whether the first and the second road vehicles will collide. The height adjustment apparatus is mounted to the first road vehicle and in communication with the control unit. The height adjustment apparatus includes a shock absorber, a bladder, and a first valve. The shock absorber is mounted at a first end to a vehicle body of the first road vehicle and at a second end to a vehicle axle of the first road vehicle. The bladder is fixed at a first end to the first end of the shock absorber and at a second end to the second end of the shock absorber. The first valve is in fluid communication with the bladder for releasing fluid stored in the bladder upon the issuance of a crash signal sent by the crash unit.